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ABSTRACT

Delaware County Community College (DCCC) in Media, Pennsylvania, began pursuing Total Quality/Continuous Quality Improvement (TQ/CQI) methods in 1985-86. A major initiative to support TQ/CQI efforts in the classroom was the development of a faculty in-service program to introduce models reflecting TQ/CQI principles and practice. Baugher's LEARN (Locate-Establish-Assess-Research-Nominate) Model and Cross and Angelo's classroom assessment technique generated the most interest. The LEARN brings the instructor together with a student quality team to identify opportunities to improve student learning. The model forces systematic data gathering, through the Plan-Do-Check-Act cycle of continuous improvement; and requires that data be collected from the entire class, not just a small segment. The student team brainstorms to identify characteristics that may be interfering with student learning, gathers data, plans changes to improve the classroom process, and evaluates the changes. Faculty were asked to describe how they adapted LEARN, the benefits, problems, and impacts on the faculty, classroom and learning outcomes. Faculty commented that students realized that they were responsible for their own learning; that it was helpful to see classroom dynamics from the students' perspective; that changes seemed trivial to instructors but important to students; and that the project created greater cohesiveness among students. The most common difficulty cited was finding time to implement LEARN. DCCC plans to increase participation to 60 full-time faculty during 1993-94. (Contains 10 references.) (KP)

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Applying Total Quality to the Teaching/Learning Process

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RUNNING HEAD: APPLYING TOTAL QUALITY TO TEACHING/LEARNING

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ABSTRACT

How faculty can apply Total Quality/Continuous Quality Improvement (TQ/CQI) principles and practices to the teaching/learning environment of the classroom is a commonly raised question in the literature on TQ/CQI in education. This paper describes one approach to encouraging and supporting faculty experimentation with TQ/CQI in the classroom. The paper describes a model provided to faculty, gives examples of how the model was adapted by faculty, and summarizes the experiences of faculty and students who experimented in their classrooms.

APPLYING TOTAL QUALITY TO THE TEACHING/LEARNING PROCESS

INTRODUCTION

Many colleges and universities attempting to apply Total Quality or Continuous Quality Improvement (TQ/CQI) have begun their efforts with administrative services, in part because models exist in the service sector that can be applied directly to administrative services in institutions of higher education. Applying the principles of TQ/CQI to the teaching/learning process requires greater effort. Chaffee and Sherr (1992) describe some of the barriers to translating TQ/CQI to the classroom: discomfort with the notion of the student as customer or beneficiary; the traditional view that faculty are experts, not only in their discipline, but also in teaching their discipline; and the structure of faculty reward and recognition systems. Chaffee and Sherr (1992) also describe recent and emerging trends pushing higher education toward adopting continuous quality improvement: business and industry leaders' call for higher education to adopt TQ/CQI; the value faculty have traditionally placed on quality; and the focus on improving student learning that is reflected in the assessment movement. Chaffee and Sherr cite examples of faculty who are trying to adopt TQ/CQI, and they note that TQ/CQI has much in common with classroom assessment and classroom research (Cross and Angelo, 1993), methods that are being used by many faculty.

Examples of faculty applying the principles of TQ/CQI in the classroom can be found in Hau (1991), Harris & Baggett (1992) and Teeter & Lozier (1993).

These efforts tend to evolve from an individual faculty person's interest, not from an institutionally driven initiative. Institutions committed to TQ/CQI are in the early, experimental stages of developing and deploying systems to help faculty take the TQI/CQI paradigm into the classroom. The purpose of this paper is to describe one college's effort to build institutional support for applying TQ/CQI to teaching and learning processes.

METHOD/APPROACH

Delaware County Community College (DCCC) is located in a suburban area west of Philadelphia, Pennsylvania. Total enrollment for Fall of 1993 was 10,778 students (6,600 full-time equivalent students). The college began pursuing TQ/CQI in 1985-86. During the first year the President and Executive Staff joined a regional roundtable of companies committed to educating themselves about TQ/CQI. Part of their work that year was to create a 10-year TQ/CQI plan for the college. Although the institutional plan focused on administrative applications during the early years (1986-1991), faculty were invited to participate in the early efforts to learn about TQ/CQI. The plan designated 1992-96 as the years that would move the TQ/CQI emphasis into the classroom. This paper describes the institutional efforts, begun in 1992-93, to support and encourage faculty experimentation in the classroom.

A major initiative, launched to support TQ/CQI efforts in the classroom, was the development of a faculty in-service program to introduce models reflecting TQ/CQI principles and practices. The models that have generated the most interest among faculty at DCCC are Cross & Angelo's (1993) classroom assessment techniques and

Baugher's LEARN model (Baugher, 1992). Because classroom assessment techniques and their fit with TQ/CQI have been described elsewhere (Cross, 1993; Cross & Angelo, 1993; Hevetly, 1993), this paper focuses on LEARN, a model that directly translates TQ/CQI principles and techniques for classroom use.

Baugher's LEARN Model

The LEARN (Locate-Establish-Assess-Research-Nominate) model, developed at Samford University (Baugher, 1992), brings the faculty member together with a student quality team to identify opportunities for improving student learning in a specific class. Two features distinguish it from other techniques faculty may routinely use to assess student understanding and learning. First, the LEARN model forces systematic data gathering. The steps in the model take the instructor and team members through the entire Plan-Do-Check-Act (PDCA) cycle of continuous improvement (Sherr & Lozier, 1991) Second, the LEARN model collects data from the entire class, not from a small, vocal, possibly unrepresentative segment of the class.

The student team uses brainstorming to identify characteristics that may be interfering with student learning. The team develops a survey, containing items based on their brainstorming, and uses it to gather data from the entire class. The objective is to identify opportunities for improving the teaching/learning environment. The data gathered from the class are used to plan changes designed to improve classroom processes. The changes are implemented and then evaluated to determine their impact.

The LEARN cycle begins early in the semester, so that students currently enrolled in the class actually experience the benefits. This distinguishes LEARN from

end-of-term student course assessments, which might benefit the next class, but provide no benefit to the currently enrolled students who have provided the feedback.

Introducing LEARN and Supporting Faculty Experimentation

The LEARN model was first introduced in January 1993. Key features of the approach were: the personal nature of the invitation from the Vice President; the presentation of LEARN as an experiment to address problems commonly faced by faculty; the emphasis on faculty participation in developing ideas for adapting the model to DCCC; the availability of proactive administrative support throughout the semester.

The Personal Invitation

During the Fall 1992 term the Academic Vice President spent time speaking individually with faculty about instructional issues of concern to them. He described an upcoming faculty in-service session that would introduce a model that might address some of their instructional concerns, and he personally invited faculty to participate. Although this approach was time consuming, it generated a high level of faculty interest. It became necessary to stop issuing invitations after over 40 faculty signed up, because the administrative team developing the session could not provide support to a larger number throughout the semester.

Context of the Introduction

At the faculty in-service session the Academic Vice President introduced the LEARN model within the context of frustrations and concerns frequently experienced by faculty. For example, he described a common pattern in which optimism at the beginning of a semester changes to disappointment as early results are gathered from

students' tests or assignments. LEARN was offered as a model that might be useful in identifying some of the factors contributing to these lower than expected levels of student performance. Repeated emphasis was placed on adapting the model to fit the needs of faculty and their classes, rather than adopting it exactly as it is described in the LEARN manual.

Faculty Participation in Adapting the Model

The key characteristics and basic steps of the LEARN model were introduced to the faculty as briefly as possible, so that most of the time of the in-service session could be devoted to working in small groups. Groups of faculty from common disciplines used brainstorming and multi-voting to generate ideas for adapting LEARN to their classrooms. The in-service session was designed to maximize the amount of time spent actively seeking ways to practice a version of LEARN. One benefit of the approach was that it generated ideas for adaptation that seemed reasonable and feasible to faculty.

Support throughout the Semester

Four administrators -- the Academic Vice President, Quality Coordinator, Dean of Planning and Management Information Systems, and Director of Institutional Research -- had worked together to develop the in-service session. Each administrator was assigned to be a contact person for a group of 10 to 12 faculty. In addition to being identified to faculty as a resource person, each administrator took a proactive role and contacted faculty during the semester to offer support.

Faculty were asked to describe the type of group sessions that would be helpful to them during the semester as they tried to apply LEARN. At their request, follow-up

sessions were held during which they could share with each other what they had tried, what had worked, and what problems they were encountering. The feedback from faculty was useful to the administrative team's efforts to develop subsequent sessions for faculty interested in the LEARN model.

RESULTS

After the semester ended, faculty were asked to describe how they adapted LEARN, the benefits experienced, the problems encountered, the impacts on students, on themselves, on the classroom environment, and on learning outcomes.

Positive Experiences

LEARN requires students to take an active role in analyzing the teaching process and how it affects them as individual learners. Faculty reported that students appreciated the opportunity to participate in assessing the classroom environment. Several faculty expressed pleasant surprise at how seriously students performed the tasks assigned to them. One faculty member observed that by participating in LEARN, students realize that they are responsible for their own learning.

Faculty commented that it was helpful to see classroom dynamics from the students' perspective. Several faculty reported that some recommended changes seemed insignificant, almost trivial, to the instructor, but that the changes were important to the students. Examples included arranging a tour of a computer lab for business students, and modifying how an instructor used the blackboard and overhead projector in a math class. Other positive changes included increasing student "empowerment", changes in classroom dynamics, and greater cohesiveness among students.

Some faculty reported evidence of improved learning. One documented better student performance in an economics class using LEARN, compared to another economics class used as a comparison group. Other positive outcomes included lower absenteeism and improvements in written assignments.

Negative Experiences

The most common difficulty reported by faculty was finding the time to conduct various phases of LEARN. The most difficult phase was setting up the team and arranging for it to meet. Various approaches were taken. Some teams met with the instructor, other did not. Some teams met during class time, others met outside of class. The approach taken depended on a variety of factors: the subject matter of the course, the level of the course, the faculty member's personality and instructional style. Some faculty found LEARN easily integrated into their classes; others had classes requiring greater effort and ingenuity to adapt the method. Another concern expressed by faculty, one related to the time issue, was "coverage" -- managing to cover the subject matter and addressing course competencies while integrating LEARN.

Faculty often reported that they had tried to implement too many changes. This occurred despite the suggestion, offered in the in-service session, to focus on improvement efforts that could be instituted relatively easily. This tendency contributed to the problems faculty had in maintaining "coverage" of subject matter.

Another difficulty is that LEARN requires the instructor to share some of the power associated with the traditional faculty role. One faculty member referred to this

in responding to the question, "What did you learn?" His answer was, "... some things in this universe can run successfully, even though I am not in charge."

SUBSEQUENT DEVELOPMENTS

Progress

In May 1993, an introduction to LEARN was presented to part-time faculty as part of the annual in-service activities for part-time faculty. Unlike the first session, this one was conducted by full-time faculty who had experimented with LEARN. Faculty development sessions during the summer of 1993 included an introduction to classroom assessment techniques and to LEARN. Twenty-four faculty participated, and a few part-time faculty began to experiment with LEARN. The summer in-service sessions were planned and conducted by three full-time faculty who had experience with LEARN. Coordination and logistical support were provided by the administrative offices involved in the original launching of LEARN.

Obstacles

The college planned to increase participation in LEARN to 60 full-time faculty during 1993-94. Several events limited the resources available to focus on LEARN during this year. A week-long faculty strike in the Fall term and an extended period of exceptionally bad weather during the winter of 1994 resulted in losses of instructional time and made it necessary to revise the academic calendar for both Fall and Spring semesters. In addition to these problems, slower than projected enrollment growth and the resulting fiscal constraints diverted staff time and energy. Faculty experimentation with LEARN has continued and faculty working on challenge grants have made progress

during the year. Nevertheless, resources to focus on LEARN were not available at the levels anticipated. During administrative planning sessions scheduled for May, 1994, an agenda for LEARN will be developed for the upcoming academic year.

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